What is claimed is:

1. A method for depositing a coating substantially composed of the element boron or an isotope of the element boron comprising the steps of:

i. Selecting a substrate for receiving said coating;

ii. Selecting an electrically conductive boron-rich feedstock in which the initial ratio of boron to a companion element is 20 or greater for said coating;

iii. Selecting a method for depositing said coating on said substrate from the group comprised of: plasma spray, cathodic arc, mass filtered cathodic arc, sputtering, electric arc, direct electrical heating, electron-induced evaporator, or photon-induced evaporation, and

iv. Depositing said coating on said substrate.

2. The method of claim **1** in which said electrically conductive boron-rich feedstock is comprised of a compound of boron.

3. The method of claim **2** in which said companion elements of said electrically conductive boron-rich feedstock is one or more selected from the group comprised of elements from group 3B of the periodic table, including the rare earth elements, the actinides, and the lanthanides.

4. The method of claim **2** in which said companion elements of said electrically conductive boron-rich feedstock is one or more element selected from the group comprised of hydrogen, lithium, carbon, sodium, magnesium, nitrogen, and sulfur.

5. The method of claim **1** in which said electrically conductive boron-rich feedstock consists of a doped solid solution of said companion elements within boron.

6. The method of claim **5** in which said companion elements of said electrically conductive boron-rich feedstock consists of one or more element selected from the group comprised of the transition metals and Group 3B elements, including the rare earth elements, the actinides, and the lanthanides.

7. The method of claim **1** in which said substrate is temperature-controlled.

8. The method of claim **1** in which said substrate is voltage-controlled.

9. A method for depositing a coating substantially composed of the element boron or an isotope of the element boron comprising,

i. Selecting a substrate for receiving said coating;

ii. Selecting an electrically conductive boron-rich feedstock in which the initial ratio of boron to a companion element is 20 or greater;

iii. Selecting a method for depositing said coating on said substrate from the

group comprised of plasma spray, cathodic arc, mass filtered cathodic arc, sputtering, electric arc, direct electrical heating, electron-induced evaporation, or photon-induced evaporation;

iv. Selecting a carrier gas compatible with said feedstock and said method for depositing said coating;

v. Selecting the composition and pressure of gases in the environment of said substrate, and

vi. Depositing said coating on said substrate.

10. The method of claim **9** in which said electrically conductive boron-rich feedstock consists of a compound of boron.

11. The method of claim **10** in which the companion element of said electrically conductive boron-rich feedstock is one or more element selected from the group comprised of elements from group 3B of the periodic table, including the rare earth elements, the actinides, and the lanthanides.

12. The method of claim **10** in which the companion element of said electrically conductive boron-rich feedstock is one or more element selected from the group comprised of hydrogen, lithium, sodium, magnesium, nitrogen, and sulfur.

13. The method of claim **9** in which said electrically conductive boron-rich feedstock consists of a doped solid solution of companion elements within boron.

14. The method of claim **13** in which said companion elements of said electrically conductive boron-rich feedstock is one or more element selected from the group comprised of the transition metals and Group 3B elements, including the rare earth elements, the actinides, and the lanthanides.

15. The method of claim **9** in which said carrier gas is one or more element selected from the group comprised Group 8 inert gases, nitrogen, oxygen, methane, sulfur hexafluoride, sulfur dioxide, hydrogen, silanes, halogens, and hydrogen halides.

16. The method of claim **9** in which said gases in the environment of said substrate substantially excludes oxygen or water vapor.

17. The method of claim **9** in which said gases in the environment of said substrate comprise a chemically reducing atmosphere.

18. The method of claim **9** in which said gases in the environment of said substrate consist of a partial vacuum.

19. The method of claim **9** in which said substrate is temperature-controlled.

20. The method of claim **9** in which said substrate is voltage-controlled.